

REMARKS

Applicants wish to thank the Examiner for the interview of August 26, 2009. In view of the above amendments and the following remarks, reconsideration and further examination are respectfully requested. Claims 74-101 are pending and stand rejected. Claims 74 and 99-101 have been amended. No new claims have been added.

A. Claims 74, 78-82, 87, 93, 94, and 96-101 were rejected under 35 U.S.C. § 103(a) as being obvious over Wensel et al. (U.S. Patent Application 2001/0031980) in view of Melzer et al. (U.S. Patent 6,847,837).

The Office Action states that it would have been obvious to one of ordinary skill in the art to combine the teachings of Wensel et al. with Melzer et al. to create the devices of independent claims 74 and 99-101. Specifically, the Office Action states that Wensel teaches a filter that is made of a conductor having a first and second end wherein the first and second ends are connected to a non-conductive dielectric. However, Wensel is not related to a vessel filter for filtering solids in a liquid flowing through the vessel filter. Wensel instead discloses a coil type device that is useful in removing clots or foreign bodies in vessels, wherein the coil is part of the clot removal device and is not implanted in the vessel. The background of the Wensel disclosure makes this clear, as it relates to thromboembolic disorders, such as stroke, pulmonary embolism, peripheral thrombosis, and the like. In other words, the Wensel coil device is employed to reestablish blood flow in an occluded vessel and is not used for filtering solids in a liquid flowing through the device on an ongoing basis. By contrast, the device of the present invention is intended to be implanted within the vessel, as opposed to being immediately removed with an occlusion. To clarify this distinction, claims 74 and 99-101 have been amended to include the limitation “wherein said vessel filter is configured to be implanted within a vessel.”

Furthermore, the coil configuration of Fig. 8 of Wensel is inserted via the mandrel 16, which is permanently attached to the coil and preferably made of stainless steel (para [47] of Wensel). According to [47] of Wensel, the insertion mandrel is 10 to 20 cm longer than the catheter such that the operator of the device can control the insertion mandrel by gripping the proximal end which extends from the proximal end of the catheter. The mandrel therefore

cannot be used in magnetic resonance systems because the length of the mandrel will cause inductive heating of the mandrel, which is problematic and dangerous to the patient.

In addition, both ends of the coils 44 and 46 of Wensel are *welded* onto the insertion mandrel 16 at weld lines 45 and 47 (paragraph [0056] of Wensel). Even if this is only the preferred embodiment, other methods of connecting the ends of the coil to the distal end of the insertion mandrel are not disclosed. With regard to paragraph [0047], in the preferred embodiment, the insertion mandrel is made out of *stainless steel* and is a solid wire. This implies that the mandrel 16 would also be made out of stainless steel. Wenzel makes no suggestion that the combination of a conductive coil and a plastic mandrel could achieve a capacitive effect, let alone a specific capacitance and inductance for use as a tuned resonant circuit. Furthermore, it appears in Fig. 8 of Wenzel that there are at least two connection points between the two helixes of the coil near the mandrel 16, thereby causing a short circuit and rendering the coil inoperable as a tuned inductor or capacitor. As a result, a person of ordinary skill in the art would not look to Wenzel when trying to determine an appropriate structure for use in magnetic resonance imaging.

With regard to the Melzer '837 reference, the Office Action states that Melzer discloses a filter whose basic framework forms the vessel filter *and* forms an inductance, referring to Figs. 8a and 8b. However, Melzer '837 only discloses a vena cava filter *onto which* separate inductive and capacitive elements are attached. By contrast, the inductance of the present invention is created by the filter structure itself. To clarify this distinction, claims 74 and 99-101 have been amended to recite "wherein the conductor solely forms the vessel filter and said filtering is solely performed by said conductor and nonconductive dielectric."

Even if the teaching of Wenzel and Melzer '837 were combined, the resulting combination would not result in the device of claims 74 and 99-101. As discussed above, the two helix portions of the metal coil of Wenzel appear to touch at a point near the mandrel 16, in which case the only possible inductive or capacitive effect would have to be created by separate inductors and capacitors connected to the mandrel 16. In such an arrangement, the filtering function would not be performed solely by the conductor and dielectric as is required by amended claims 74 and 99-101. Applicants therefore respectively submit that amended claims 74 and 99-101 are in condition for allowance.

Applicants further submit that claims 75-98 depend from claim 74 and are therefore allowable at least to the extent that claim 74 is allowable. With regard to the rejection of claim 75 under § 103(a) based on the combination of Wensel '980, Melzer '837, and further in view of Dubrul et al. (U.S. Patent 6,238,412), Applicants further note that the device of Dubrul suffers from many of the same inadequacies as Wensel. For example, Dubrul does not disclose a capacitance and inductance which form a resonant circuit. In addition, the Dubrul device would suffer from inductive heating problems as discussed above with respect to Wensel. Applicants further submit that Dubrul does not disclose that the "braid" coating (insulation) of Dubrul may be adapted to regulate capacitance in order to fine tune a resonant circuit. Therefore, a person of ordinary skill in the art would not be motivated to combine the teaching of Melzer, Wensel, and Dubrul.

B. Claims 74-98 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement.

Claims 74 and 99-101 have been amended to remove the clause "wherein said first and second ends are the only conductive material adjacent to said nonconductive dielectric." Furthermore, the same claims have been amended to add the clause "wherein said ends of said conductor are insulated with an insulator that represents said dielectric and forms said capacitance with said ends separated by said insulator." Support for these amendments can be found at least at paragraphs [0011] and [0014] of the U.S. Application Publication (2006/0058832).

For the foregoing reasons, Applicants respectfully submits that the present application is in condition for allowance, and respectfully requests such action. Should it facilitate allowance of the application, the Examiner is invited to telephone the undersigned attorney.

Respectfully submitted,

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